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AUTHOR Kehoe, John J.
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ABSTRACT

The study examines patterns in students' choices of in-state and out-of-state colleges, with regard to certain academic and economic variables such as class standing, parental income, financial support, and costs. It then examines the impact that financial aid would have on their choices. A survey was undertaken of 26,903 Pennsylvania public and nonpublic high school seniors. Four choice patterns were examined: (1) first choice in-state, expected to go in-state; (2) first choice out-of-state, expected to go out-of-state; (3) first choice in-state, expected to go out-of-state; and (4) first choice out-of-state, expected to go in-state. The results are examined as they relate to student race, sex, financial aid available, other sources of funds, religious affiliation, parental and peer influences, college reputation, and 14 other variables. It is concluded that financial aid can be used effectively as an incentive, and the data gained can be used in policy formation. (MSE)

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MIGRATIONAL CHOICE PATTERNS IN FINANCIAL AID POLICY MAKING

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John J. Kehoe

Educational Research Associate

Pennsylvania Department of Education

333 Market Street

Harrisburg, Pennsylvania 17126

(717) 783-6580

2/3

HE 012 874



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Mary Corcoran
University of Minnesota
(Editor, AIR Forum Publications)

ABSTRACT

This study examines in-state and out-of-state choice pattern differences among students with regard to certain academic and economic variables (e.g., class standing, parental income, financial support, costs) and then examines the impact that financial aid would have upon their choice. A sample survey of 26,903 Pennsylvania public and nonpublic high school seniors illustrated the role that specific background variables play in determining locational choice. The trends and relationships that emerge provide valuable information to policy makers that can be geared to the specific economic, academic and geographical preference characteristics of those contemplating formal studies.

As colleges and universities become increasingly aware of declining enrollment prospects, greater attention has been accorded the recruiting and planning functions in an effort to adequately assess the institution's resources and constraints to enable them to effectively compete in the educational marketplace.

State systems of higher education have not escaped this concern and have increasingly redoubled their efforts to determine the rationale behind student choice as it relates to geographical location preference. Such information would enable the state to effectively compete in the regional marketplace for its own and other states' students in what is generally perceived to be a "buyer's market."

From a policy perspective, it thus becomes of paramount importance for a state system of higher education to examine the factors involved in selecting a college or university, especially as it relates to in-state versus out-of-state attendance.

It has long been the practice of various states to examine their net migration patterns to determine future planning needs and to compare the "drawing power" of its college and university programs compared with those of other states. Preferential treatment has historically been granted in-state residents by granting them lower tuition rates and providing other forms of state-administered financial aid.

As college enrollments have begun to level off in recent years, a student's geographical preference decision has become more important in that a student going out of state now represents a loss, in a very real sense, to the state's economy (the human capital approach), an institution's viability (lower replacement probability) and a state's prestige (where the decision to attend is reflective of desirability of a specific program).

REVIEW OF RELATED RESEARCH

Research in the college attendance decision area has basically taken two perspectives, the sociologic and economic.

Sociologic Perspective

The sociologic perspective examines the exploratory nature of the research reflecting the causative effects of combinations of demographic and psychological variables upon college attendance. These studies are primarily concerned with the effects and correlates of social class. An examination of many sociological variables, however, produces findings, which tend to be inconsistent, with variation occurring through differences in sampling technique or analytical method employed. In several studies (Douvan and Kaye, 1967; Sewell and Shah, 1968; Trent and Medsker, 1968; State University of New York, 1969 and 1970; Berls, 1969; Folger, Astin and Boyer, 1970 and Tillery and Kildegaard, 1973) parental encouragement was found to be a significant factor in college attendance. Other factors such as aptitude (Berdie and Hood, 1966; Cowhig and Nam, 1959), interest (Trent and Medsker, 1968; Berls, 1969; Cowhig and Nam, 1959 and 1960), financial aid (Boyd and Tenske, 1975; Fife, 1975; Munday, 1976; and Leslie, Johnson and Carlson, 1977) and high school curriculum (Cowhig and Nam, 1960; Leslie, Johnson and Carlson, 1977) also proved to be significant predictors.

In the last decade, cost-enrollment studies have become increasingly important in determining the overall effect pricing policies might have upon different economic groups. These studies have taken the economist's perspective by examining relationships (as opposed to causes) and have utilized the existing data base employed by the sociologists. As a result, a greater emphasis on the combination of economic variables (such as family income, tuition, room and board, and opportunity costs) has occurred.

Economic Perspective

Of all the studies grouped under this classification, the Campbell and Siegel (1967) study is generally acknowledged to be the first important research on student access. Utilizing the variables of income, tuition and number of students as an investment approach to educational demand theory, the authors concluded that a 10% increase in average real tuition has been associated with a 4.4% enrollment decrease. Galper and Dunn (1969), after examining the relationship between induction and discharges from the armed services and four-year college enrollment, concluded that a 10% rate of growth in the armed forces is associated with a 2.6% decline in college enrollment. Hoenack (1967), by analyzing the effects of student cost, income and unemployment upon freshman enrollment, was able to estimate separate demand functions for each campus of the University of California. His findings indicated that a \$100 tuition increase would decrease enrollment three-to-six percentage points, depending on family income and state college price changes. In a later study utilizing similar variables, Hoenack (1973) developed an analysis of enrollment demand at each college of the University of Minnesota. The results of this study showed that a \$100 increase in tuition reduces enrollment 2.62 to 0.12 percentage points, depending upon the college. Corazzini (1972) employed economic and noneconomic factors such as state average tuition, father's education, opportunity cost and academic achievement in order to simulate demand and supply side constraints. He concluded that a \$100 decrease in tuition is associated with a 2.65% increase in enrollment.

In addition to this, two major studies incorporating financial aid simulations have yielded similar results. The National Commission on the Financing of Postsecondary Education (1973), treating changes in student grants like changes in tuition, estimated that an increase of \$100 in tuition

would reduce enrollment by 0.7% among upper-income students, 1.2% among middle-income students and 3.1% among low-income students. Carlson (1975), in a nationwide analysis of federal student aid program modifications, concluded that for every \$100 decrease in tuition, institutional enrollment would increase more than 1% among students from families earning more than \$12,000 annually and more than 7% from families earning less than \$6,000 annually.

At least one state tuition-lowering experiment has yielded similar results. Stampen (1974), in reporting on the University of Wisconsin policy, concludes that each \$100 decrease in tuition at various campuses resulted in an enrollment increase between 4.8% and 12.2% above the average increase for the university.

Student choice, however, transcends the notion of a linear demand equation by examining choice "patterns" or "sets" as they relate to a student's decision to attend or not to attend a public or private institution of higher education, an in-state or out-of-state institution of higher education or the decision of whether or not to go to college at all.

Studies concerned with student choice (the decision of which college to apply once access was obtained) have also produced significant findings. In an analysis of data from four states, Radner and Miller (1966) found that a \$100 increase in the cost of attendance in one institutional sector would decrease enrollment in that sector from 3.26 to 0.71 percentage points, depending on family income and the particular institutional sector. Kohn, Manski and Mundel's study (1973), in simulating the results of several unobserved individual and institutional decisions, concluded that a \$100 increase in tuition produces from .40 to .11 percentage point decrease in utility (the attractiveness of a college). They had also postulated that if an individual is not able to matriculate at the institution that student prefers, there is

a large probability that that student will not go to college at all. Spies (1973) utilized linear equations representing student and school characteristics (such as income, Scholastic Achievement Test scores and tuition) in describing three different decisions--the decision to apply to any school, the decision to apply for financial aid and the decision to enroll once admitted. His findings indicated that a unit increase in cost/income led to a -6.72 percentage point change in enrollment. Jackson and Weathersby (1975) reanalyzed several of the above studies in determining a comparative "price responsiveness" ranging from -.06 to -1.9 percentage points change in enrollment ratio for each \$100 increase in cost to the student.

A 1977 Rand study (Carroll, Mori, Relles and Weinschrott) examined the probability of a student attending a given institution by modeling student characteristics as a function of the attributes of the institution they attend. By adapting this model to various Basic Educational Opportunity Grants alternatives, the authors found that:

- Women would be much more responsive to the policies than men.
- The policies would increase the number of low income high school graduates going on to college by 18 to 33% and lower middle income graduates by 6 to 10%.
- The policies would have relatively little effect on high ability students (only 2 to 3%), moderate effect on those of average ability (3 to 7%) and the greatest effect on those of low ability (4 to 10%).

Jackson (1977) examined the effect that financial aid had upon student enrollment. His findings illustrated that:

- Socioeconomic background, academic achievement and aspiration are the major determinants of postsecondary choice.

- Once individuals have made their choice, college characteristics have little effect on these decisions.
- Financial aid does have an effect upon an individual's decision.
- It is the offer of aid rather than the amount of aid that is most important.

The notion of student choice was further pursued by Tierney (1980) who examined the probability of a student matriculating at a private versus public institution vis-a-vis their initial preferences. Using several regression equations as predictors of public and private matriculating decisions, he found that variables affecting the "net price" of attending a particular institution play a significant role in most students' matriculation decisions. In addition, "academic reputation" was found to play an important role in matriculation decisions for the middle and upper income levels.

Purpose of this Study

The purpose of this study is to examine the in-state and out-of-state choice patterns of college-bound seniors as they relate to socioeconomic, academic and financial resource variables and to assess the impact that offers of financial aid would have upon the decision to reconsider attending an in-state school.

Choice Patterns

There are essentially four choice patterns or "sets" that a student planning to attend college would be classified under. They are:

1. First choice, in-state; expected to go, in-state.
2. First choice, out-of-state; expected to go, out-of-state.
3. First choice, in-state; expected to go, out-of-state.
4. First choice, out-of-state; expected to go, in-state.

To assess the reasons for determining these choice patterns, two strategies were employed. Groups 1 and 2 were analyzed according to how students reacted to information concerning their first-choice institution. (It is assumed that for Groups 1 and 2, first choice and expected to attend reasons would correspond.) Groups 3 and 4, however, were asked to compare their expected choice with their first choice and to cite the reason why their expected choice differed.

Methodology

To operationalize the strategies described above, an 11-item survey instrument was administered to a geographically stratified sample of 26,903 Pennsylvania high school seniors. Of this total, 14,855 (55.3%) stated that they intended to continue their studies through some type of formal education upon graduation from high school.

The survey instrument examined basic socioeconomic, academic and financial variables as well as variables relating to their decision to continue formal education. Inclusive in the above are variables relating to sex, race, parental income, academic standing, postgraduation plans, sources of support and reasons for attending.

Separate regression analyses were performed for each of the groups with the choice pattern serving as a dependent dichotomous variable and coded as: $1 = \text{choice pattern}_i$; $0 = \text{all other choice patterns}$; where $i = \text{group}$.

Groups 1 and 2 were analyzed with the independent variables relating to reasons and sources of support for institutions of first choice together with the general classification variables of sex, race and class standing.

Groups 3 and 4 were analyzed with the independent variables relating to reasons and sources of support for institutions where they expected to enroll together with the general classification items of sex, race and class standing.

Sex, race and reasons were also treated as dichotomous variables with sex being coded as: 1 = female, 0 = male; race being coded as: 1 = nonwhite, 0 = white; and reason coded as: 1 = most important, 0 = not important.

All regressions were analyzed by three levels of parental income: low - 11,999 and under; middle - 12,000-20,999; and high - 21,000 and above.

RESULTS

Groups 1 and 2

The results of the regression equations for Groups 1 and 2 are presented in Tables 1 and 2.

As seen in Table 1, the variables--race, standing and cost of education--are statistically significant in each of the income equations. Since these coefficients are all negative, it can be reasoned that as the numbers of nonwhite students decrease, the tendency to select this pattern increases. Similarly, as class standing increases, the tendency to select this first choice, in-state, expected in-state pattern increases. In addition, as the cost of education decreases, the tendency to choose this option increases illustrating the importance of cost to each variable. The student earnings and loan variables were statistically significant in the low and high income equations, while specialized programs, academic reputation and state grants were significant in each income group equation. It is interesting to note that state grants is the only resource variable having a positive direction in each of the three income equations. On the other hand, loans have a positive effect on this choice pattern in the higher income group but a negative effect on the lower income group. The higher the utilization of "other sources" of revenue, however, the greater the tendency to not choose this pattern. Athletic reputation had an important negative effect in the lower and middle groups but did not enter into the higher income equation. Thus,

TABLE 1

GROUP 1--VARIABLES ASSOCIATED WITH A FIRST CHOICE, IN-STATE,
EXPECTED TO ATTEND IN-STATE CHOICE PATTERN

Independent Variables	Low Income (N=3572)		Middle Income (N=5156)		High Income (N=5660)	
	B	F-Ratio	B	F-Ratio	B	F-Ratio
Sex	.011160	(0.73)	.015091	(2.12)	.021487	(3.22)
Race	-.084760	(27.72)*	-.138744	(55.40)*	-.046838	(4.15)*
Standing	-.013953	(4.43)*	-.013196	(5.64)*	-.019540	(9.24)*
Cost of Education	-.000053	(169.92)*	-.000058	(279.85)*	-.000079	(444.40)*
Parental \$ Support	-.000007	(0.77)	.000005	(0.63)	.000001	(0.07)
Student Savings	-.000022	(2.29)	-.000010	(0.81)	.000005	(0.26)
Student Earnings	-.000051	(8.61)*	-.000013	(1.00)	-.000040	(7.83)*
Social Security	-.000005	(0.12)	-.000012	(0.64)	.000060	(8.10)*
Basic Ed. Opportunity Grants	-.000016	(1.20)	-.000026	(3.62)	.000005	(0.59)
State Grants	.000098	(37.74)*	.000090	(39.35)*	.000072	(12.57)*
Loans	-.000022	(4.34)*	-.000009	(1.45)	.000034	(20.31)*
Other Sources	-.000025	(4.63)*	-.000032	(12.20)*	-.000032	(10.74)*
Location	.033435	(1.66)	.007677	(0.09)	.020824	(0.60)
Religious Affiliation	-.094680	(3.12)	-.310294	(41.37)*	-.102397	(3.85)
Family Recommended	--	--	.009203	(0.05)	.083934	(3.61)
Friends Recommended	.073860	(1.53)	.013490	(0.06)	.132738	(4.72)*
Friends Enrolled	.075975	(0.80)	.065017	(0.84)	--	--
Academic Reputation	.080359	(9.32)*	.077241	(9.08)*	.056605	(4.95)*
Athletic Reputation	-.133807	(7.43)*	-.159193	(13.77)*	--	--
Specialized Program	.062159	(6.75)*	.065135	(7.20)*	.078434	(9.92)*
Financial Aid Offer	.031962	(0.42)	-.050399	(1.28)	.071589	(1.12)
Affordable	.061134	(2.92)	.092236	(8.40)*	.125118	(10.73)*
R ²	.088		.105		.107	

* p < .05

the greater the importance placed on athletic reputation, the greater the tendency to select another choice pattern.

Table 2 illustrates the different mix of variables associated with an out-of-state choice. Race is statistically significant in all three income equations but takes on a positive sign in each. This implies that as the number of nonwhite students increase, the tendency to choose an out-of-state school also increases. Sex was statistically significant for the high income group with a negative relationship indicating that as the number of higher income females increases, the less likely it is that they will choose this pattern. Cost of education has a positive significant effect in each of the three income equations illustrating that the tendency to apply to higher cost schools increases the likelihood of selecting this pattern. State grants are significant in all three equations but take on a negative relationship in each. This implies that as state grant usage declines, the choice of an out-of-state school becomes more apparent.

Other sources of revenue and religious affiliation have significantly positive relationships in each of the three income equations, while loans and student earnings have a significantly positive effect in the lower income group. Surprisingly, loans have a significantly negative effect in the upper income group illustrating the tendency of those high income students having loans to select another choice pattern. Parental income support was significant for the upper income group; thus, the higher the amount of parental income support, the greater the tendency of those in the upper income group to select this choice pattern.

Social Security/Veterans Administration support was statistically significant for the middle and upper income groups reflecting the wider utilization of resources for those choosing an out-of-state school.

TABLE 2

GROUP 2--VARIABLES ASSOCIATED WITH A FIRST CHOICE, OUT-OF-STATE,
EXPECTED TO ATTEND OUT-OF-STATE CHOICE PATTERN

Independent Variables	Low Income (N=3572)		Middle Income (N=5456)		High Income (N=5660)	
	B	F-Ratio	B	F-Ratio	B	F-Ratio
Sex	-.019186	(2.98)	-.016022	(3.48)	-.047921	(19.69)*
Race	.067999	(24.61)*	.108592	(49.54)*	.062908	(9.20)*
Standing	.002127	(0.14)	-.003041	(0.44)	.007931	(1.87)
Cost of Education	.000030	(72.07)*	.000026	(81.64)*	.000049	(207.26)*
Parental \$ Support	.000006	(0.68)	-.000001	(0.07)	.000012	(4.96)*
Student Savings	.000023	(3.73)	.000002	(0.05)	-.000009	(0.79)
Student Earnings	.000033	(4.87)*	.000020	(3.28)	.000011	(0.76)
Social Security	.000010	(0.78)	.000025	(4.03)*	.000041	(4.69)*
Basic Ed. Opportunity Grants	.000024	(3.72)	.000019	(2.73)	-.000032	(2.90)
State Grants	-.000092	(45.69)*	-.000067	(32.09)*	-.000079	(18.26)*
Loans	.000024	(7.17)*	-.000004	(0.43)	-.000039	(32.22)*
Other Sources	.000024	(5.74)*	.000049	(40.64)*	.000045	(25.40)*
Location	-.031000	(1.68)	-.024157	(1.31)	-.045050	(2.42)
Religious Affiliation	.162796	(12.19)*	.358282	(80.50)*	.129236	(6.74)*
Family Recommended	.014335	(0.11)	.020493	(0.37)	-.020957	(0.24)
Friends Recommended	-.065090	(1.59)	.024335	(0.29)	-.089456	(2.43)
Friends Enrolled	-.042844	(0.34)	-.054891	(0.88)	.036954	(0.28)
Academic Reputation	-.047577	(3.77)	-.021896	(1.07)	-.027866	(0.97)
Athletic Reputation	.086985	(4.14)	.050752	(2.04)	-.009344	(0.04)
Specialized Program	-.021443	(0.91)	-.017981	(0.80)	.030582	(1.23)
Financial Aid Offer	-.004903	(0.01)	.068406	(3.44)	-.028600	(0.21)
Affordable	-.040819	(1.64)	-.049625	(3.55)	-.074313	(3.86)
R ²	.064		.072		.076	

* p < .05

Groups 3 and 4

As Table 3 indicates, the first choice, in-state, expected to go out-of-state group produces distinct patterns over each of the three income groups. Race is a significant variable for the high income group, while class standing is significant for the lower and middle income groups. Thus, as the number of nonwhites in the higher income group increases, the greater the likelihood of them exemplifying this pattern. Similarly, the lower the class standing in the lower and middle income groups, the greater the tendency of displaying this choice behavior. In each of the three income equations, "being better off financially" and "first choice too much of a dream" were statistically significant reasons for making this choice. "Getting a job to help with studies," "relieving financial strain (but not having to work)" and "living closer to home" were statistically significant reasons for the middle and upper income groups. The lower income group also made this choice pattern "to be with friends," while "religious affiliation" was a statistically significant reason for the upper income group to display this choice pattern.

Table 4 illustrates the importance of the "reason" variables associated with a first choice, out-of-state, expected to go in-state pattern. Being "better off financially," "relieving financial strain (no need to work)," first choice being "too much of a dream," "avoiding family hassle over location of first-choice school" and "living closer to home" are all statistically significant in each of three income categories and reflect the decision to exemplify this choice pattern. Sex, race, class standing, cost of education and parental monetary support are all statistically significant in the middle and upper income groups. Race, however, has a positive relationship for the middle income group and a negative relationship with the higher income group illustrating the tendency of middle income nonwhites to select this pattern

TABLE 3

GROUP 3--VARIABLES ASSOCIATED WITH A FIRST CHOICE, IN-STATE
EXPECTED TO GO OUT-OF-STATE CHOICE PATTERN

Independent Variables	Low Income (N=3571)		Middle Income (N=5456)		High Income (N=5660)	
	B	F-Ratio	B	F-Ratio	B	F-Ratio
Sex	-.001067	(0.06)	-.004522	(2.03)	.002921	(0.91)
Race	.009761	(3.35)	.005551	(0.93)	.013844	(5.41)*
Standing	.004745	(4.68)*	.005077	(8.64)*	-.000531	(0.11)
Cost of Education	.000002	(1.96)	.000001	(1.50)	.000001	(2.16)
Parental \$ Support	-.000001	(0.03)	-.000001	(0.31)	-.000002	(1.06)
Student Savings	.000008	(2.49)	.000002	(0.37)	-.000001	(0.22)
Student Earnings	-.000003	(0.18)	.000007	(2.89)	.000001	(0.11)
Social Security	-.000004	(0.73)	.000002	(0.16)	.000007	(1.86)
Basic Ed. Opportunity Grants	.000001	(0.05)	.000008	(3.50)	.000001	(0.03)
State Grants	-.000002	(0.18)	-.000002	(0.10)	-.000005	(0.69)
Loans	--	--	-.000005	(3.81)	-.000001	(0.28)
Other Sources	.000001	(0.03)	.000002	(0.56)	-.000001	(0.07)
Better Off Financially	.020341	(11.88)*	.023463	(30.30)*	.022054	(22.67)*
To Be With Friends	.061333	(10.24)*	.009391	(0.46)	.003241	(0.10)
Relieve Financial Strain (Will Not Have to Work)	.017853	(3.00)	.023783	(8.73)*	.022361	(9.72)*
Job to Help With Studies	.014328	(3.62)	.024161	(15.23)*	.021746	(10.29)*
Too Much of a Dream	.078580	(51.97)*	.034315	(17.08)*	.045867	(45.52)*
Avoid Hassle Over Location	.004933	(0.12)	.068961	(3.31)	.001414	(0.02)
Live at Home	.012326	(2.04)	.009377	(2.11)	--	--
Live Closer to Home	.040023	(8.50)*	.041644	(13.33)*	.006670	(0.56)
Religious Affiliation	-.005017	(0.06)	.018930	(1.10)	.121520	(53.82)*
R ²	.025		.019		.023	

* p < .05

TABLE 4
GROUP 4--VARIABLES ASSOCIATED WITH FIRST CHOICE, OUT-OF-STATE,
EXPECTED TO GO IN-STATE CHOICE PATTERN

Independent Variables	Low Income (N=3571)		Middle Income (N=5456)		High Income (N=5660)	
	B	F-Ratio	B	F-Ratio	B	F-Ratio
Sex	.012756	(3.10)	.012918	(4.25)*	.024032	(12.61)*
Race	-.004398	(0.24)	.024268	(4.59)*	-.026856	(4.14)*
Standing	-.004198	(1.42)	-.007271	(4.56)*	-.007267	(4.00)*
Cost of Education	-.000001	(0.07)	-.000006	(7.50)*	-.000007	(10.92)*
Parental \$ Support	.000004	(0.81)	.000013	(10.90)*	-.000009	(7.38)*
Student Savings	.000001	(0.03)	.000004	(0.31)	.000009	(2.05)
Student Earnings	.000002	(0.04)	.000003	(0.14)	.000018	(4.60)*
Social Security	.000001	(0.02)	-.000016	(2.72)	.000008	(0.44)
Basic Ed. Opportunity Grants	-.000002	(0.04)	--	--	.000030	(5.32)*
State Grants	.000016	(2.85)	.000012	(2.33)	-.000007	(0.28)
Loans	.000004	(0.37)	.000010	(4.97)	--	--
16 Other Sources	-.000002	(0.11)	-.000003	(0.31)	.000009	(7.38)*
Better Off Financially	.108759	(118.72)*	.135496	(260.12)*	.151736	(215.11)*
To Be With Friends	.061876	(3.64)	.058498	(4.55)*	.109041	(23.29)*
Relieve Financial Strain (Will Not Have to Work)	.090393	(26.91)*	.120678	(57.82)*	.243300	(233.30)*
Job to Help With Studies	.022929	(3.24)	.053575	(19.27)*	.075362	(24.94)*
Too Much of a Dream	.241869	(171.87)*	.342588	(438.09)*	.372607	(608.15)*
Avoid Hassle Over Location	.135337	(32.03)*	.142598	(48.17)*	.210925	(109.50)*
Live at Home	.020877	(2.04)	.056963	(20.08)*	.077885	(23.74)*
Live Closer to Home	.055560	(5.72)*	.102218	(20.66)*	.076905	(15.23)*
Religious Affiliation	.044729	(1.61)	.023271	(0.43)	.096864	(0.07)
R ²	.078		.115		.155	

* p < .05

and the tendency of upper income nonwhites to select another pattern. Parental support has a negatively significant effect in the upper income equation illustrating the tendency of those in the higher income brackets who rely on parental support to choose another pattern. Student earnings and state grants are also significant in the higher income equation; but the former has a positive relationship, while the latter is negative. Utilization of student earnings for this income group is, thus, directly associated with this pattern, while the utilization of state grants declines as this pattern is opted.

It is interesting to note that cost of education at the expected-to-enroll institution is negatively related to this choice pattern in the middle and higher income equations illustrating the importance of cost at the expected-to-enroll institution in influencing a student's decision.

Responses to Financial Aid

Those who stated that they expected to go to an out-of-state school and felt financial aid was an important consideration were asked to indicate if a greater amount of financial aid would help them reconsider their choice of an out-of-state school in favor of attending one in Pennsylvania. Those responding to this question were coded into a dichotomous variable where 1 = those who would reconsider and 0 = those who would not reconsider. A regression analysis was performed with the above variable (reconsidering) serving as the dependent variable and the variables relating to reasons for selecting and sources of support at the institution where a student expects to enroll serving as the independent variable. To further guard against errors in completing this item, only responses from Groups 2 and 3 (the two groups where students cite they expected to attend an out-of-state school) were considered. In addition, it was also felt that the first choice itself (in-state or out-of-state) would also have an effect upon whether or not additional aid would

enable a student to reconsider attending an in-state school. This variable was also dichotomized (1 = first choice, 0 = other).

As Table 5 illustrates, the three income groups would respond to financial aid overtures differently.

Race has a statistically significant effect upon the middle and upper income groups. In other words, as the numbers of nonwhite increase, there is a greater tendency to reconsider a Pennsylvania school due to greater financial aid offers.

Certain other resources have also had a differential impact. Student savings and Basic Educational Opportunity Grants have a statistically significant effect in the upper income group. This illustrates that for students whose parents have higher incomes, the higher a student's savings or Basic Educational Opportunity Grants, the greater the tendency to reconsider a Pennsylvania school through financial aid. This may reflect the student's desire to "piggy-back" their present resources with additional funds to attend the more selective in-state school. (Selectivity has long been associated with upper income choice.) Loans are significant for the middle and upper income groups illustrating the willingness to trade their debt for the selection of an in-state school.

The reasons for selecting an institution where a student expects to go also plays a significant effect in reconsidering an in-state school. The reason variables reflecting "doing better financially" or the "first choice was too much of a dream" were statistically significant in the equation for those in the lower income group. The variable representing first choice in-state was significant in the higher income equation. This illustrates that the greater the number of those initially preferring an in-state school but expect to go out of state, the greater the number who would reconsider

TABLE 5

VARIABLES ASSOCIATED WITH THE TENDENCY OF FINANCIAL AID TO INFLUENCE A STUDENT'S DECISION

TO RECONSIDER A PENNSYLVANIA INSTITUTION

Independent Variables	Low Income (N=231)		Middle Income (N=292)		High Income (N=331)	
	B	F-Ratio	B	F-Ratio	B	F-Ratio
Sex	.082058	(1.45)	-.059187	(0.97)	-.024590	(0.21)
Race	.108818	(2.36)	.271858	(10.78)*	.179300	(5.35)*
Standing	.006997	(0.47)	.015184	(0.23)	-.030046	(1.41)
Cost of Education	.000028	(2.29)	.000025	(2.09)	-.000017	(1.27)
Parental \$ Support	-.000039	(0.95)	.000027	(0.48)	-.000011	(0.22)
Student Savings	.000050	(0.44)	.000043	(0.62)	.000134	(10.01)*
Student Earnings	.000049	(0.54)	-.000056	(0.84)	.000005	(0.01)
Social Security	.000040	(0.35)	.000064	(0.70)	--	--
Basic Ed. Opportunity Grants	.000029	(0.18)	.000002	(0.00)	.000179	(5.71)*
State Grants	.000157	(3.23)	.000024	(0.08)	.000132	(2.89)
Loans	-.000008	(0.02)	.000112	(5.21)*	.000074	(4.77)*
Other Sources	.000043	(0.69)	.000019	(0.19)	.000031	(0.69)
Better Off Financially	.373698	(4.16)*	.655745	(3.40)	.065557	(0.12)
To Be With Friends	.270142	(1.34)	.759744	(3.66)	-.068600	(0.10)
Relieve Financial Strain (Will Not Have to Work)	.196926	(0.99)	.706531	(3.81)	.195928	(0.94)
Job to Help With Studies	.244279	(1.75)	.601501	(2.82)	-.029534	(0.02)
Too Much of a Dream	.477858	(4.77)*	.707230	(3.69)	.166701	(0.69)
Avoid Hassle Over Location	.173041	(0.53)	.830876	(4.79)*	.154110	(0.54)
Live at Home	.065054	(0.09)	.551884	(2.11)	-.241758	(1.18)
Live Closer to Home	.090803	(0.12)	.396599	(1.03)	.090740	(0.18)
Religious Affiliation	.312353	(1.73)	.628797	(2.76)	.057039	(0.05)
First Choice - In	-.106203	(1.54)	--	--	.193155	(6.65)*
First Choice - Out	--	--	.062564	(0.77)	--	--
R ²	.171		.139		.225	

* p < .05

attending an in-state school through greater amounts of financial aid.

POLICY IMPLICATIONS

The implications inherent in this study enable policy makers to ascertain the importance of background decisional and resource variables as they relate to choice patterns of college-bound students. Such information can be utilized to be incorporated into marketing strategies in an effort to determine an effective recruiting and planning strategy which would in turn help to maximize enrollment potential. Financial aid as an incentive can best be utilized to determine the most cost-effective mix of resource and cost variables in developing a more responsive mechanism toward meeting student needs.

The results reported in this study not only reflect in-state, out-of-state disparities but examine these migrational tendencies through preferences (first choice and expected to enroll).

It is this choice set understanding that can also impinge upon such operational factors as tuition, financial aid, academic standards and admissions policies as they relate to the fiscal realities confronting higher education. This understanding, in and of itself, will not set policy but will rather provide a valuable tool upon which policy decisions can be made.

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